

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A communication server configured to deliver a data stream from a remote sender to a remote destination over a communication network, the communication server comprising:

a data storage unit comprising a computer readable medium accessible thereto;

an identification unit configured to indentify the pieces of data from an intended incoming data stream, to be received from the remote sender ~~to be replaced~~ according to [[a]] at least one digital signature that is a function of data contained in said pieces, and configured to identify substantially identical pieces of data, retrievable from said data storage unit, according to said at least one digital signature;

an anchor-determination unit configured to determine locations in the data stream where predefined groups of characters from the data stream fulfill a predetermined criterion, the respective locations of such groups being reference points to the respective digital signature associated with the pieces of data in each group, said reference points being computed by said identification unit and being determined without using metadata and without prior placing of indications within the data stream showing wherein the data begins, the reference points being determined based on a probability of returning one anchor per data range of a predetermined size; and

a replacement unit configured to replace the pieces of data from ~~[[an]]~~ the intended incoming data stream ~~to be received from the remote sender~~ with the substantially identical pieces of data retrievable from said data storage unit according to said reference points.

2. (previously presented) The communication server according to claim 1 further comprising a messaging unit for notifying the remote sender to stop delivering intended incoming pieces of data, said incoming pieces of data being retrievable from the data storage unit.

3. (original) The communication server according to claim 2, wherein the remote sender is a PC delivering data.

4. (original) The communication server according to claim 1, wherein the pieces of data are packets of TCP/IP transmission protocol.

5. (previously presented) The communication server according to claim 1, wherein the packets are stored in the data storage unit in blocks of variable size which is determined according to an anchor location on the original data stream.

6. (original) The communication server according to claim 1, wherein the digital signature is based on any of CRC, SHA1 or DES computed value of a predetermined number of bytes from a selected piece of data.

7. (original) The communication server according to claim 1, wherein the digital signature is calculated from a predetermined number of bytes of data, the location of said bytes in the data stream is in correlation with at least one anchor, and the at least one anchor is a pointer to a location in the data stream having a compatibility with the predetermined criterion.

8. (original) The communication server according to claim 7, wherein the predetermined criterion is a function of data contained in said pieces of data and is independent of a title, address or routing information of said data.

9. (original) The communication server according to claim 8, wherein the function is responsive to a predetermined character combination such that an anchor is assigned upon recognition of said predetermined character combination.

10. (previously presented) The communication server according to claim 9, wherein the predetermined character combination is a string of predefined characters.

11. (previously presented) The communication server according to claim 9, wherein a set of anchors is assigned to a respective piece of data, each anchor from the set is in correlation to an n-tuple location in said respective piece of data, and wherein the function is a hash function yielding a predefined value over the n-tuple.

12. (previously presented) The communication server according to claim 11, wherein the hash function is selected from the group consisting of LFSR, CRC, SHA1, DES, and MD5.

13. (original) The communication server according to claim 1, wherein files are delivered through P2P communication.

14. (currently amended) A method of delivering a data stream from a remote sender to a remote destination over a communication network, the method comprising:

accessing a computer readable medium containing instructions for controlling a computer system, the instructions comprising computer readable code for implementation of:

determining reference points in the data stream being locations in the data stream where a predefined number of characters fulfill a predetermined criterion, said reference points being determined without using metadata and without prior placing of indications within the data stream showing wherein the data begins, the reference points being

determined based on a probability of returning one anchor per data range of a predetermined size;

registering a digital signature being a value returned from a predetermined function taken over a predefined range of content, the predefined range of content is in correlation with said reference points; and

using the digital signature to locate locally stored content, which matches pieces of data within the data stream currently received from the remote sender, giving rise to the locally stored matching content, and using said reference points ~~or creating a dictionary and using it~~ for synchronizing between the currently received pieces of data and between the locally stored matching content.

15. (canceled)

16. (currently amended) A system configured to reduce data transportation volumes over a communication network, comprising at least one communication server configured to deliver a data stream from a remote sender to a remote destination over a communication network, the communication server comprising:

a data storage unit comprising a computer readable medium accessible thereto;
an identification unit configured to identify the pieces of data to be replaced according to a digital signature that is a function of data contained in said pieces;

an anchor-determination unit configured to determine locations in the data stream where predefined groups of characters from the data stream fulfill a predetermined criterion, the respective locations of such groups being reference points to the respective digital signature associated with the pieces of data in each group, said reference points being computed by said identification unit and being determined without using metadata and without prior placing of indications within the data stream showing wherein the data begins, the reference points being determined based on a probability of returning one anchor per data range of a predetermined size; and

a replacement unit configured to replace pieces of data from an intended incoming data stream to be received from the remote sender with substantially identical pieces of data retrievable from said data storage unit according to said reference points,

said server being configured to deliver the data stream to the remote destination over the communication network.

17. (previously presented) The method according to claim 14 further comprising notifying the remote sender to stop delivering intended incoming pieces of data, said incoming pieces of data being retrievable from a data storage unit that comprises the computer readable media.